Missouri Botanical Garden
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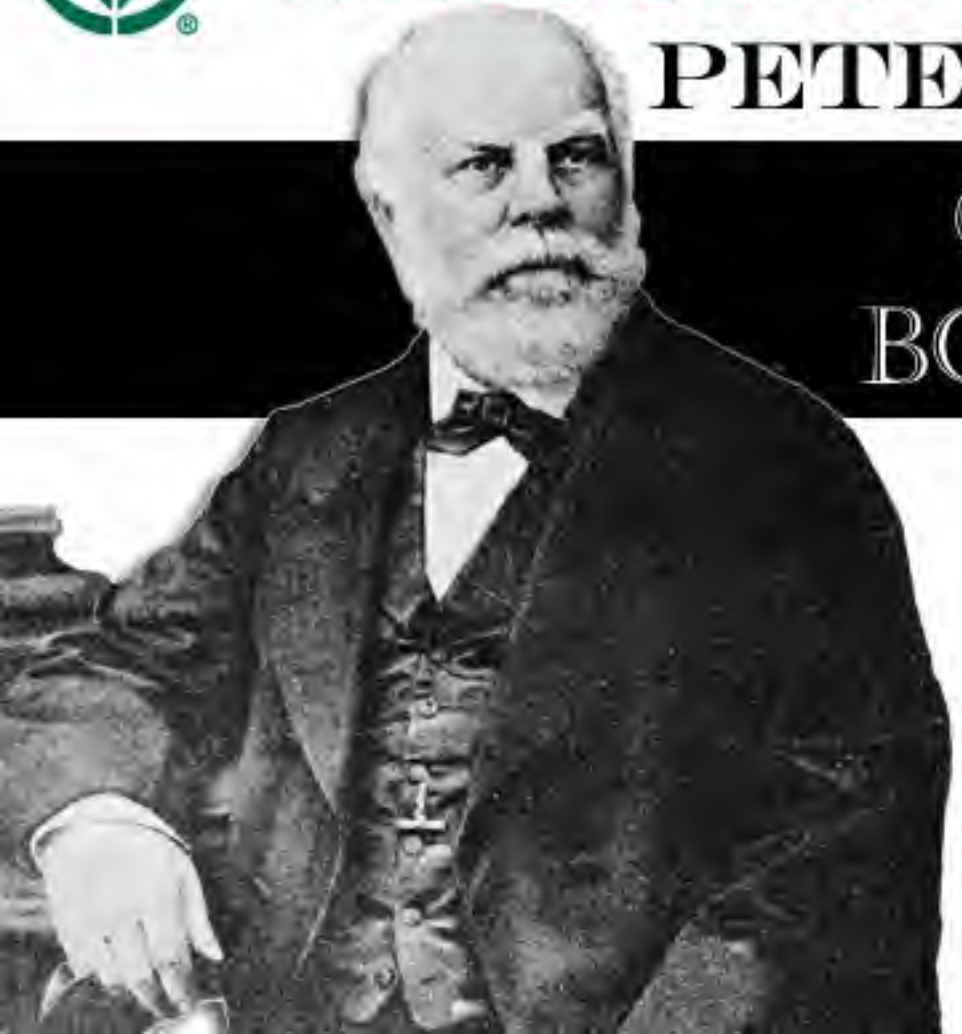


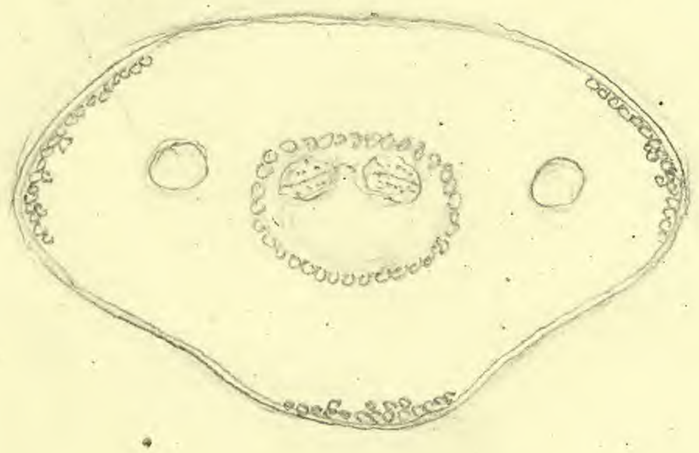
Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Abies subalpina

March 20 1889

×30.

mountain slopes east of
Sitka J. Muir 1879
depressed shrub



hypoderm cells on edges
and keel below, none on upper
surface

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GEORGE ENGELMANN HERBARIUM

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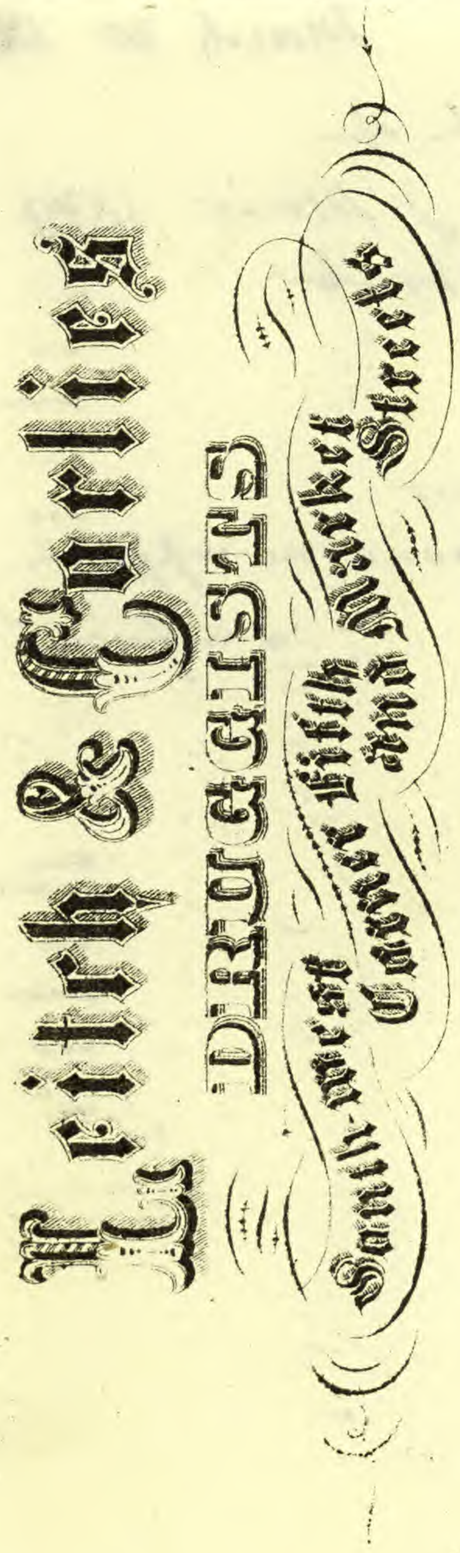
GEORGE ENGELMANN PAPERS



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cm
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Abies lasiocarpa Hook! Sept 6 1870

Douglas Co., Columbia River

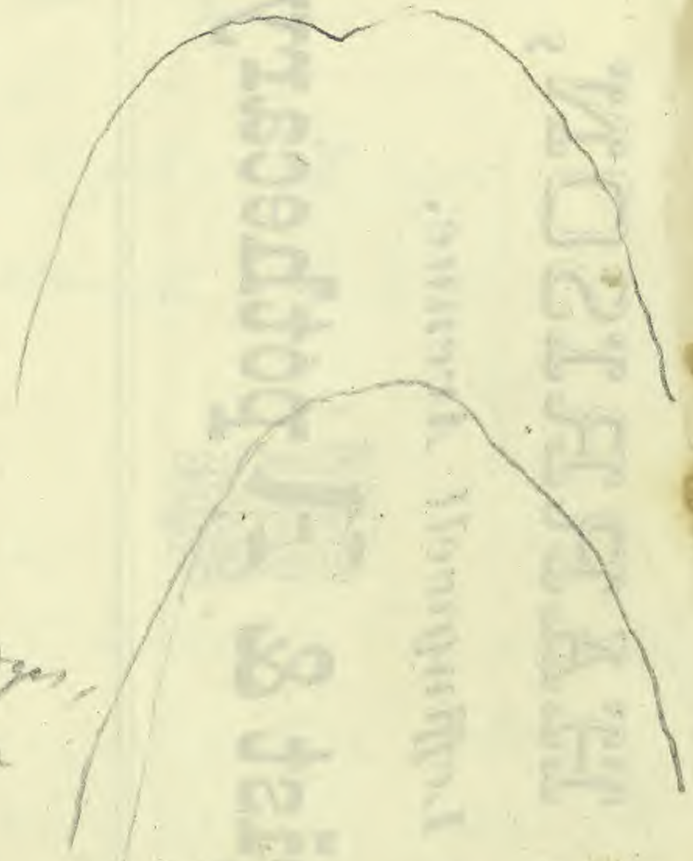
Abies lasiocarpa Hook! H. D. Sm. Sept 30 1875

Douglas Co., Columbia River ex Herb Kew

x 30

4-6 rows of stomata in each band

resin-ducts nearer the centre than in any other species examined



conspicuous false bordered (small) — edges, some at keel, very few on upper surface

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Abies lasiocarpa Hook.! Sept 6 1870

Douglas, Columbia River

Fb. Kew.

scale scarcely turned up

— without pedicel:

width : hight 17 : 11

more pubescent than the other

almost 3 : 2

×2

seed 6/2 : 3/2 mm

nearly twice as long

exterior valve ob

ridged, covering exterior

of seed, inner v

wide

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29 tab

Abies subalpina

Rocky & Cascade Mts

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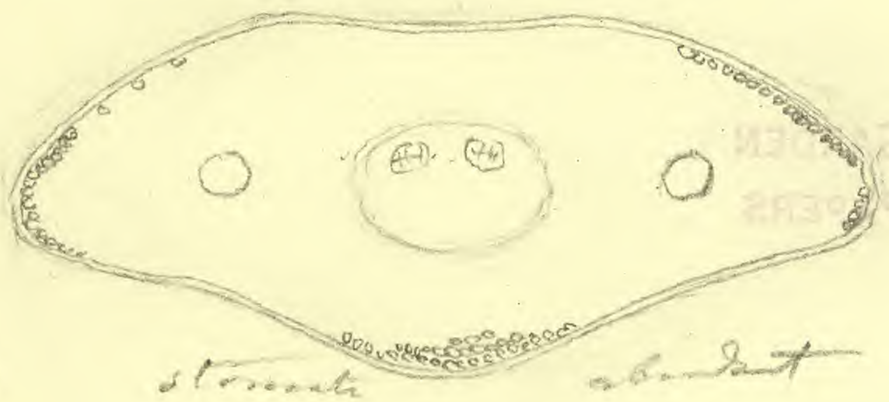
March 30 1821

Abies subalpina
var fallax
Cascade Mountains with *A. amabilis*
A. nobilis
S. sargentii
Aug 1820

very sapling.

stomata abundant



many large loose cells within sheath

×30

stomata abundant

upper surface

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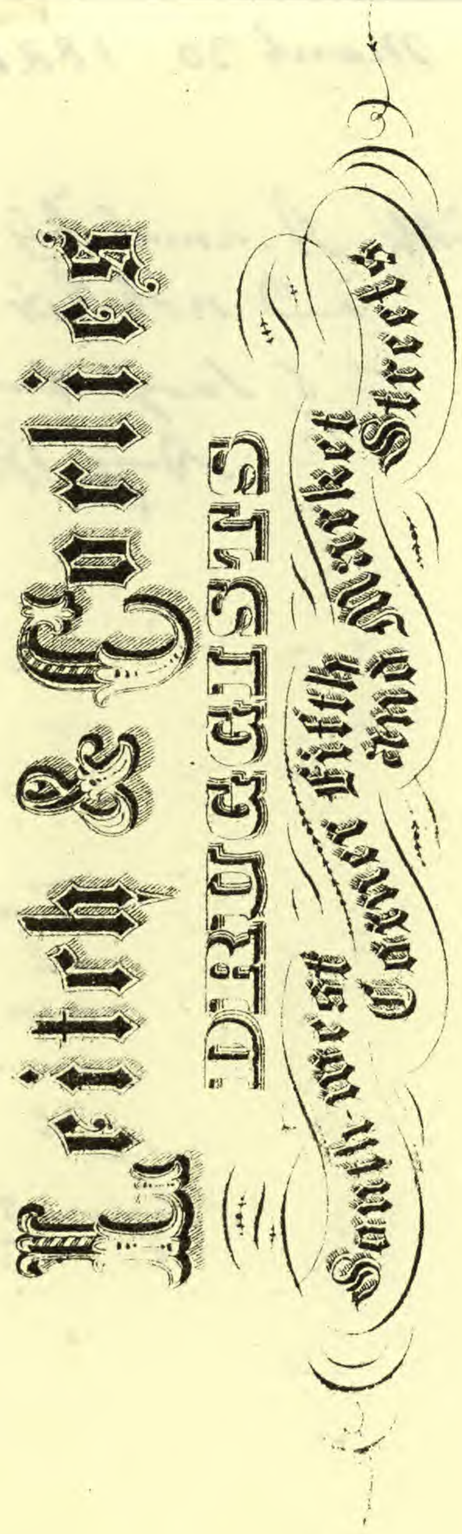

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Abies grandis Sept 28 1875

T. S. Brandegee

X30

High up the San Juan Pass
and on the Animas

On the cretin Slope
of the Mountains
SW Colorado — none
east
Sept 1875

resinous ducts in the middle of the leaf
between the upper and lower surface
and runways between the central vascular
body and the margin, surrounded by
parenchymatous cells on both sides
nowhere touching the cortical layer

high Mountains
Cedar City
Utah Johnson
1874

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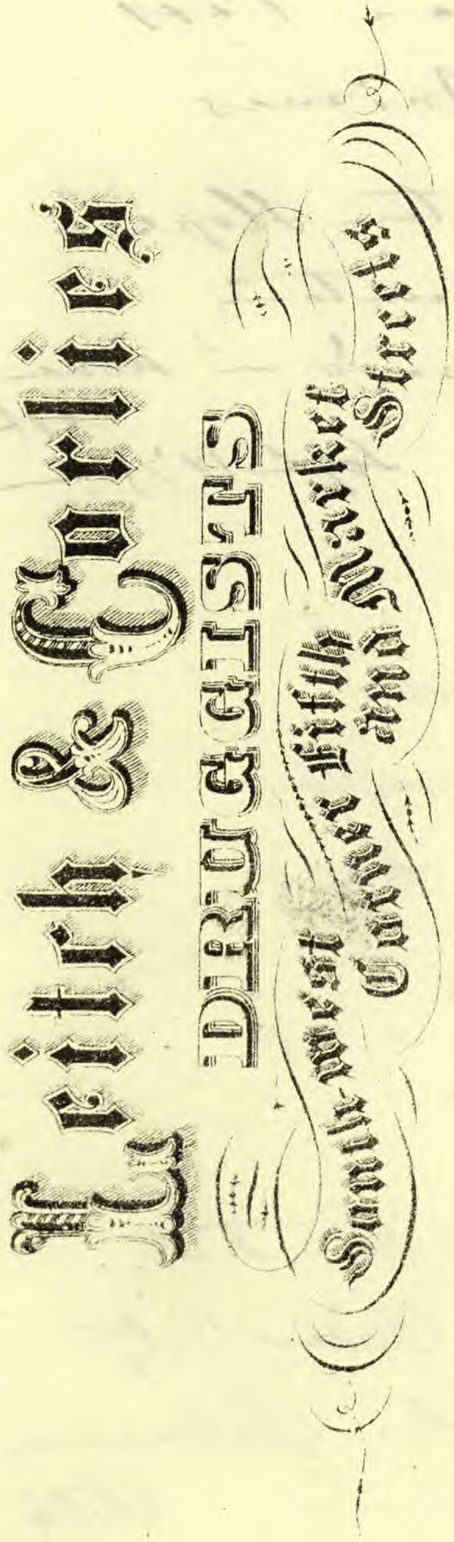

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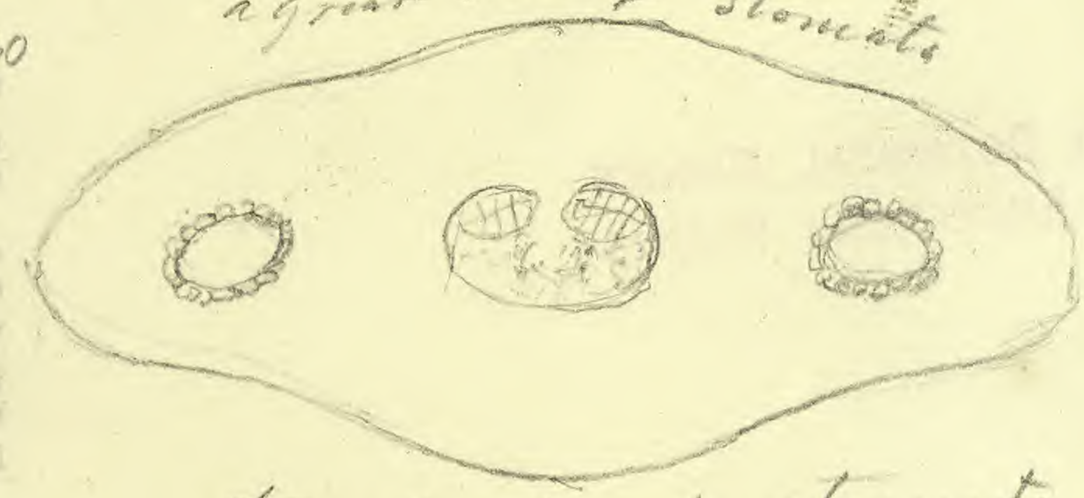
Mex

Sept 30 1875

Dr Parry, Source of the Yellowstone 1873

a great many stomata

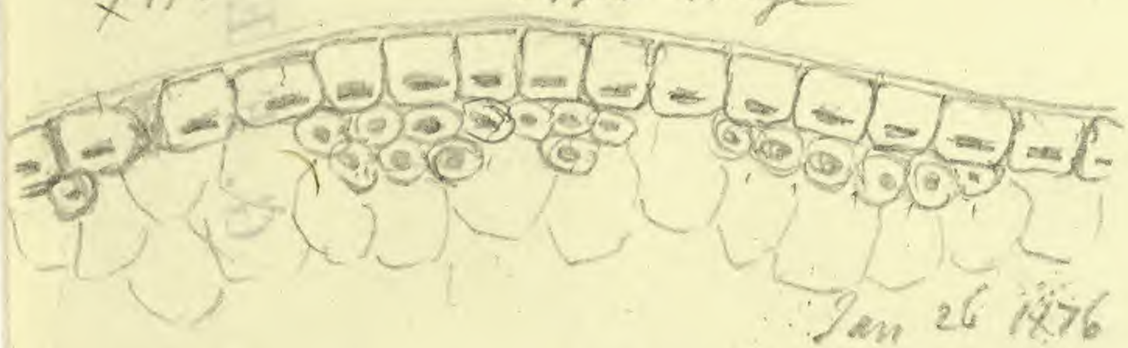
x 30



two bands of stomata

x 150

upper ridge



Jan 26 1876

x 150

Have examined all my specimens from Rocky Mts & Oregon with same result as to hypodermic cells.

Hypodermic layer interrupted on upper surface cells small, thickened — same on edges & carina

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Sept 30 1875

Abies.

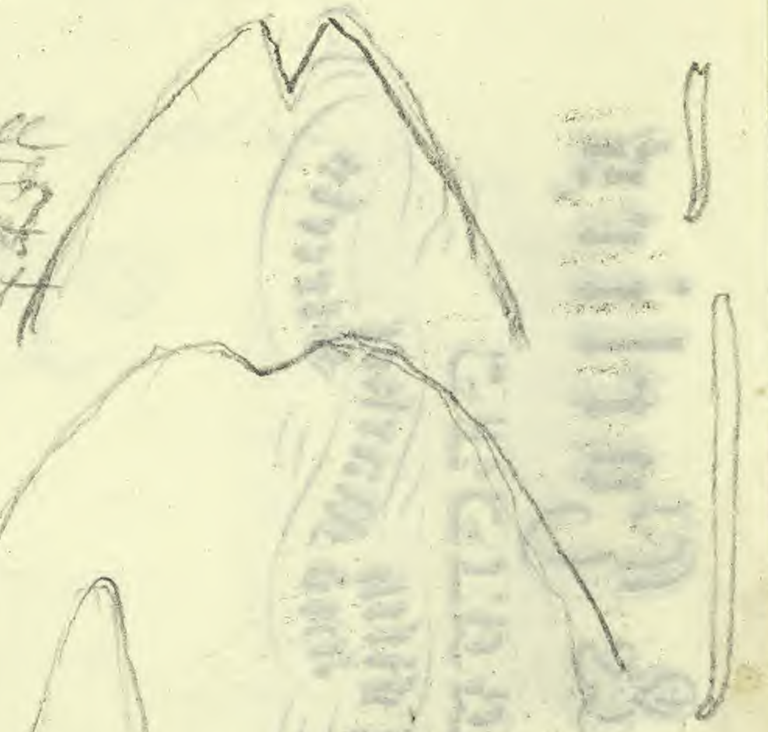
X30 J. Engl Clear Creek Valley, Colorado Sept 1874

1. Leaf of seedling of this year.

a single row of stomata towards tip

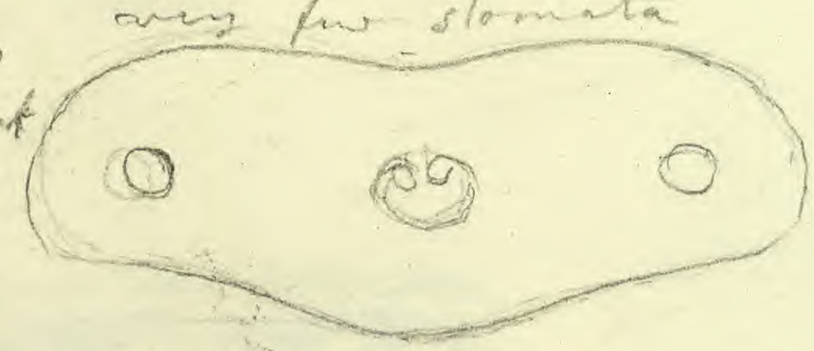
2 bands of stomata

only small sometimes no stomata

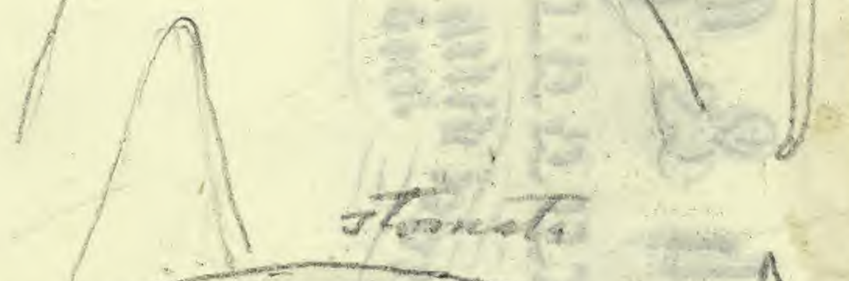


2. prostrate branches at base of trunk Clear Creek at Lindstroms

very few stomata

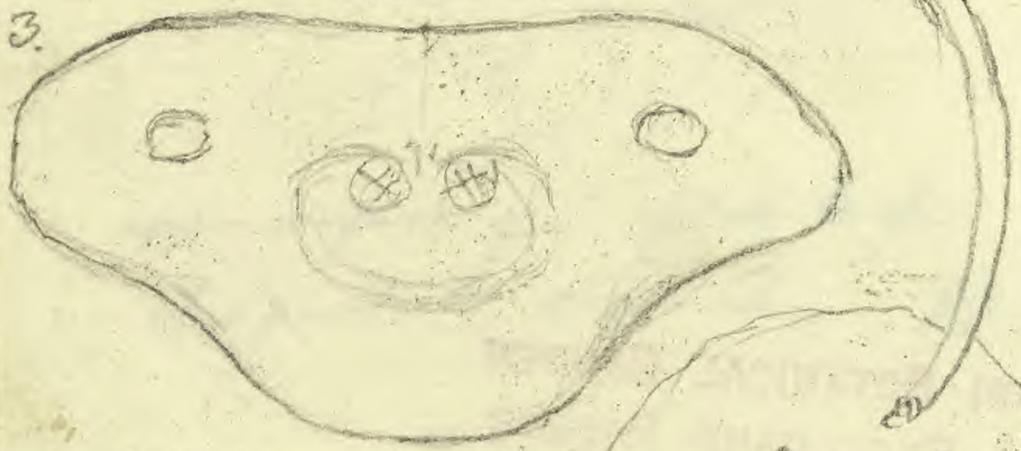


X30



stomata

3.



fertile young Tree at Mad Creek from fertile Branch

4.

fertile young tree in Clear Creek Valley leaf of fertile Branch

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South-west Corner Fifth and Market Streets

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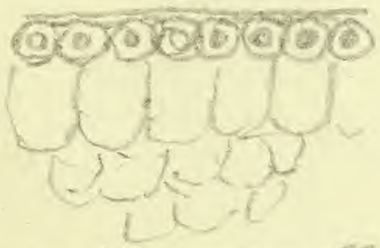
Anandale's
Clear Creek G. Engl
1874

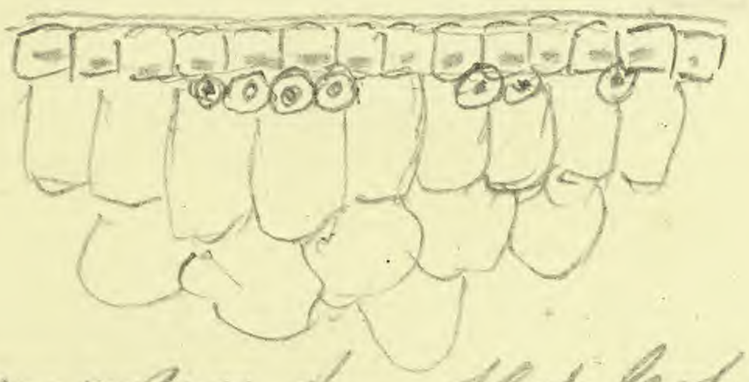
Jan 26 1876

×150 Cuticle of seedling fig 1



epidermis cells small, round section
no hypoderm any where

Dust of old leaf



upper surface of flat leaf
of prostrate branches fig 2

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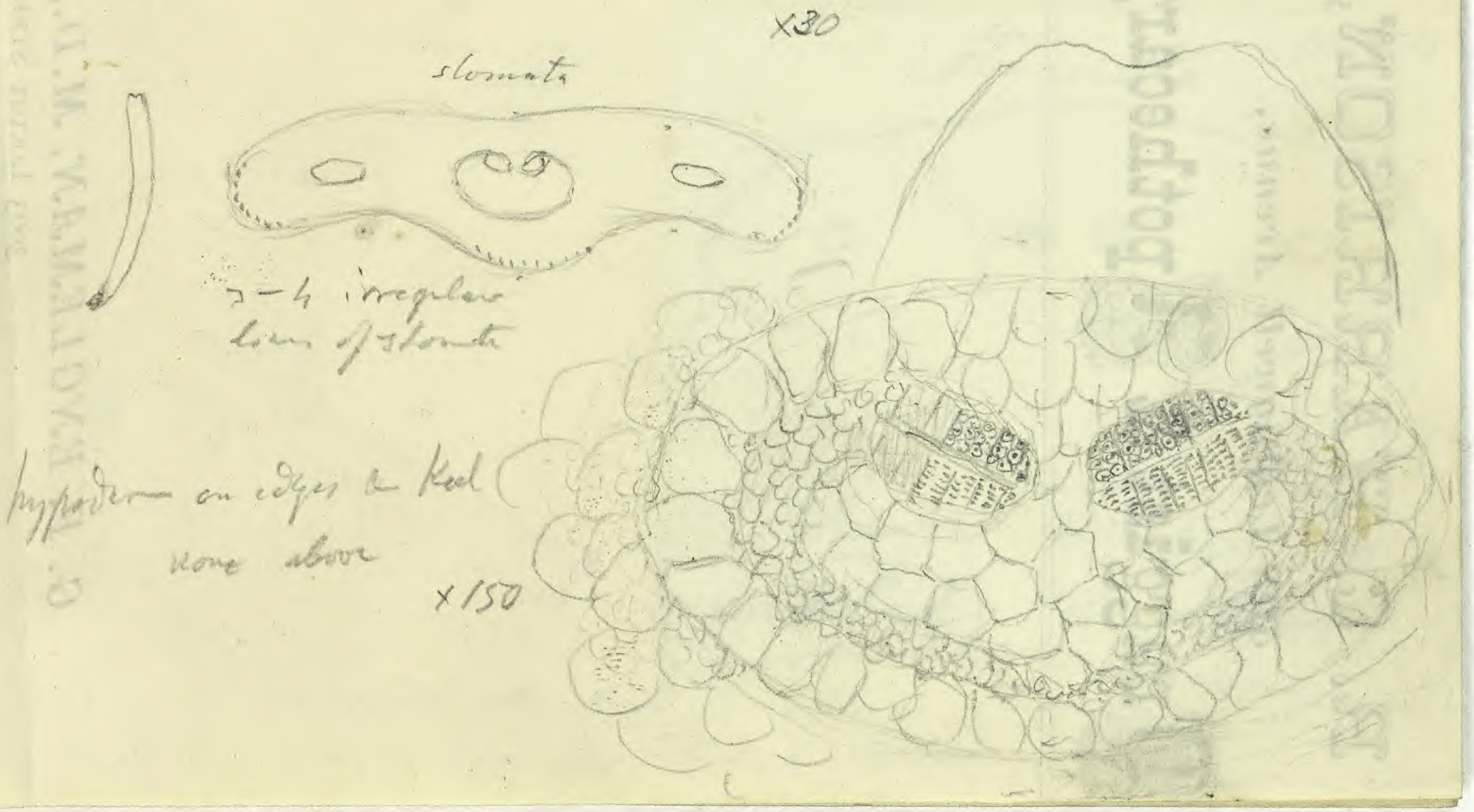
Abies amabilis fide Parlatore Sept 7 1870

Columbia Valley.

Dr Lyall, 1860 ex H.C. Kew

Columbia Valley Dr Lyall Sept 30 1875



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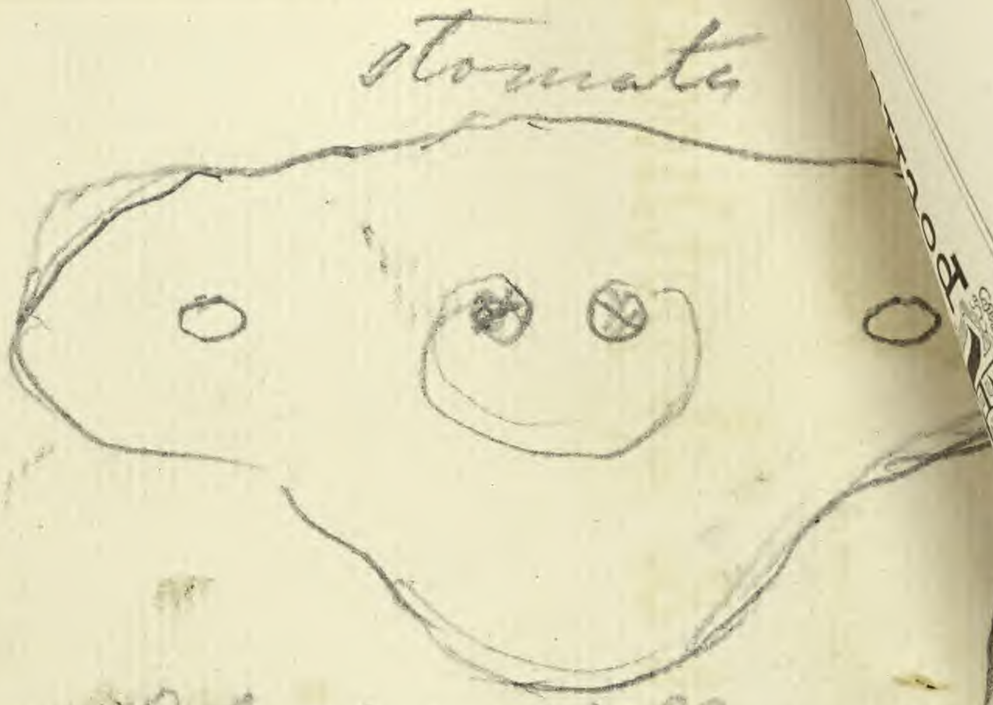
Leaves sharp pointed or obtuse

cone immature

x2

3 ; 2



stomate

Columbia Valley

pointed leaf

Lyall

small first rib Keel 2 sides

very few scattered above

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Dr

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Abies amabilis f. de Parlatore Sept 7 1870

Columbia Valley.

Dr Lyall, 1860 ex Herb. Kew

Leaves sharp pointed or obtuse

scale 14–15 : 9 : 10

3 : 2

cone immature

x2

seed 4 : 3 mm

This is A. bifolia [hetero

A. Murray in Proc. Hortic

vol

the typical species!

small bast cells Keel 2 sides

very few scattered above

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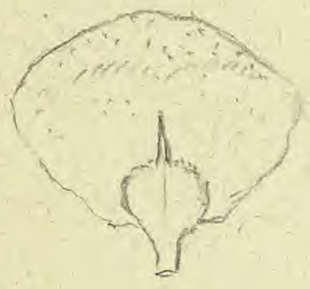
A. anabelia fide Parlatore Sept 7 1870

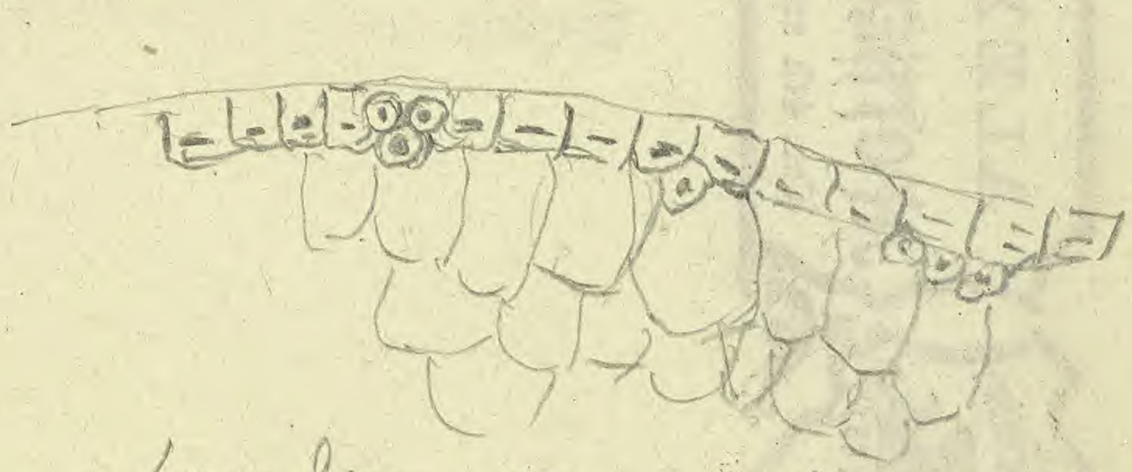
East side of Cascade Mtns, 49 Lat. 6000' Lyall
Aug 1860



scales 18 : 13
nearly 3 : 2

too immature to examine seed

stomata



hypoderm rarely always much
interrupted — cells sometimes
(rare ones) pushed between the epiderm cells

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ALL THE NEW REMEDIES CONSTANTLY ON HAND

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Sept 29 1875

Mount Hood, Hall, Oregon

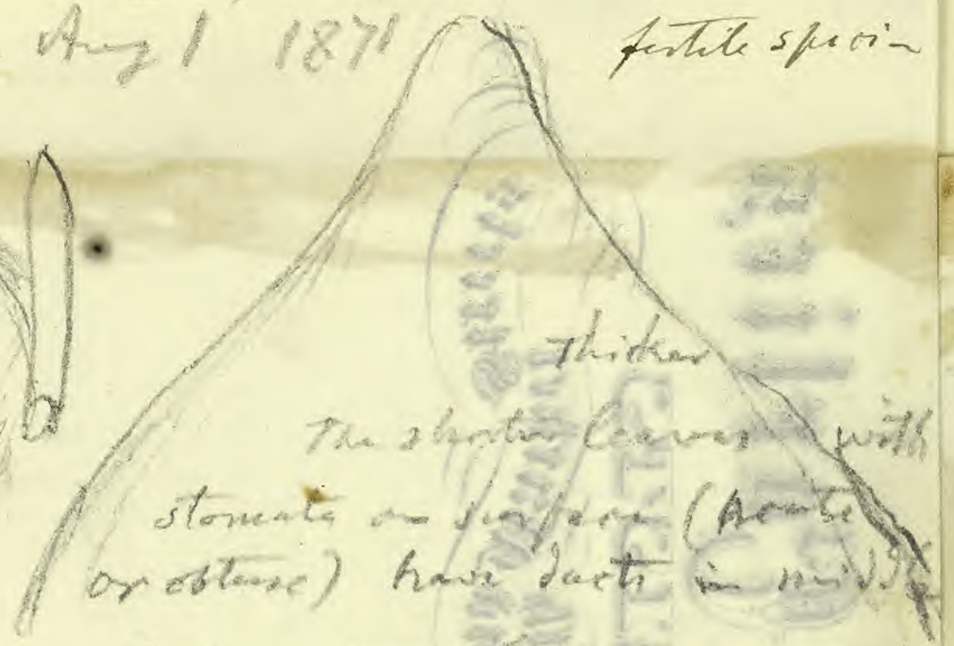
Aug 1 1871

N2

fertile spor

×30 stomata scattered all over

2 bands of stomata

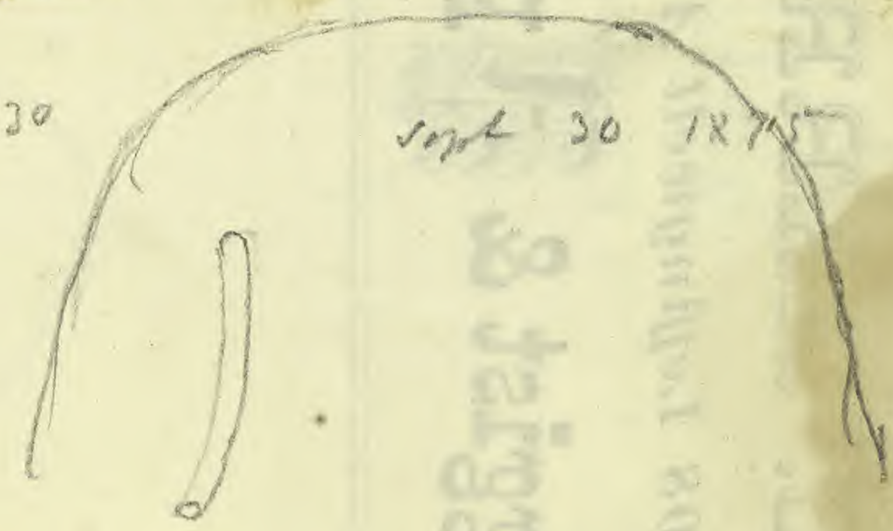


Thicker

The shorter leaves with stomata on surface (acute or obtuse) have ducts in mid rib

Leaf 17 mm long

×30



Sept 30 1875

leaf of same axis as above, lower down, obtuse

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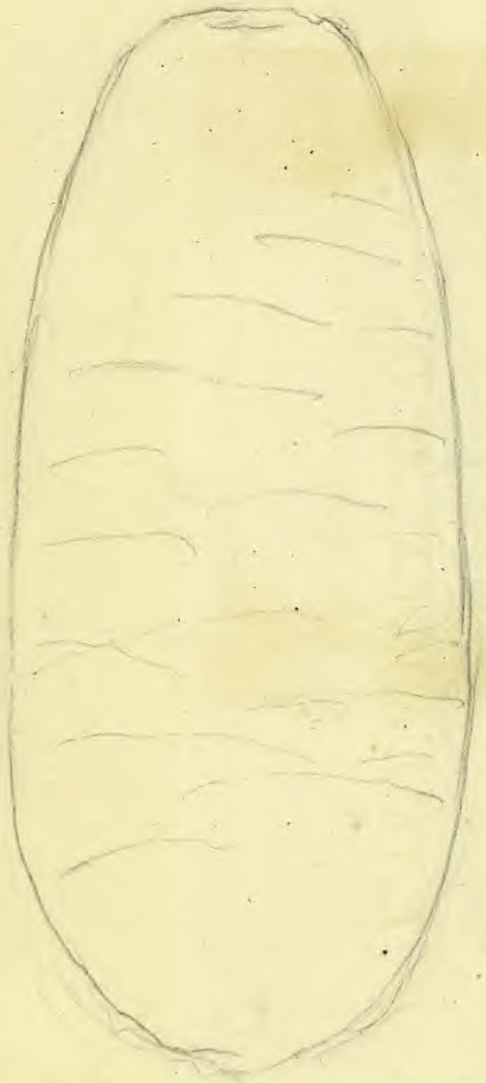
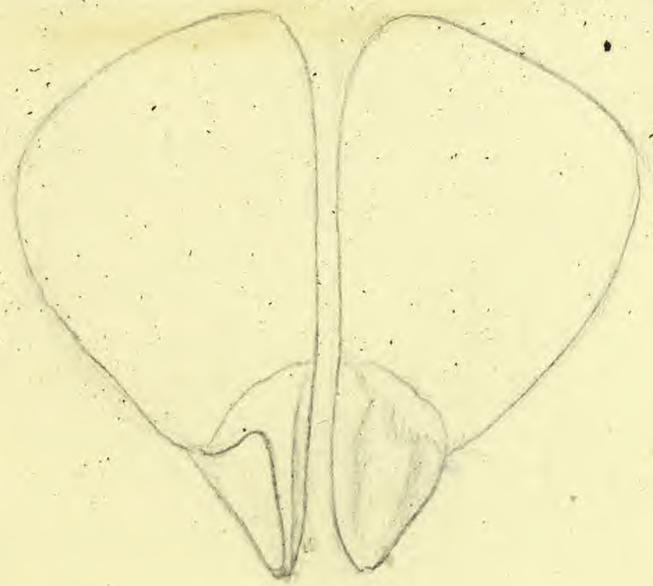
abies grandis
high up on Mt Hood, Oregon
E. Hall 1871 Aug 1st

Dec 12



24 mm wide
16 high



being 10-10½ mm
12
seed 7-7½

Only cone seen 3 mm wide
7.2 long, tapering

Apothecary & Druggist

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No. Date 187

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Mount Hood, C Hall 1871

immature corm, 3 - 3¼ inch l
1 1/3 inch wide, tapering to both e

Corm tapering
to roots both ends

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MISSOURI BOTANICAL
GEORGE ENGELMA

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Smith & Celia
DRUGGISTS
Smith-Wirst Grave Hill Market and Olive Streets

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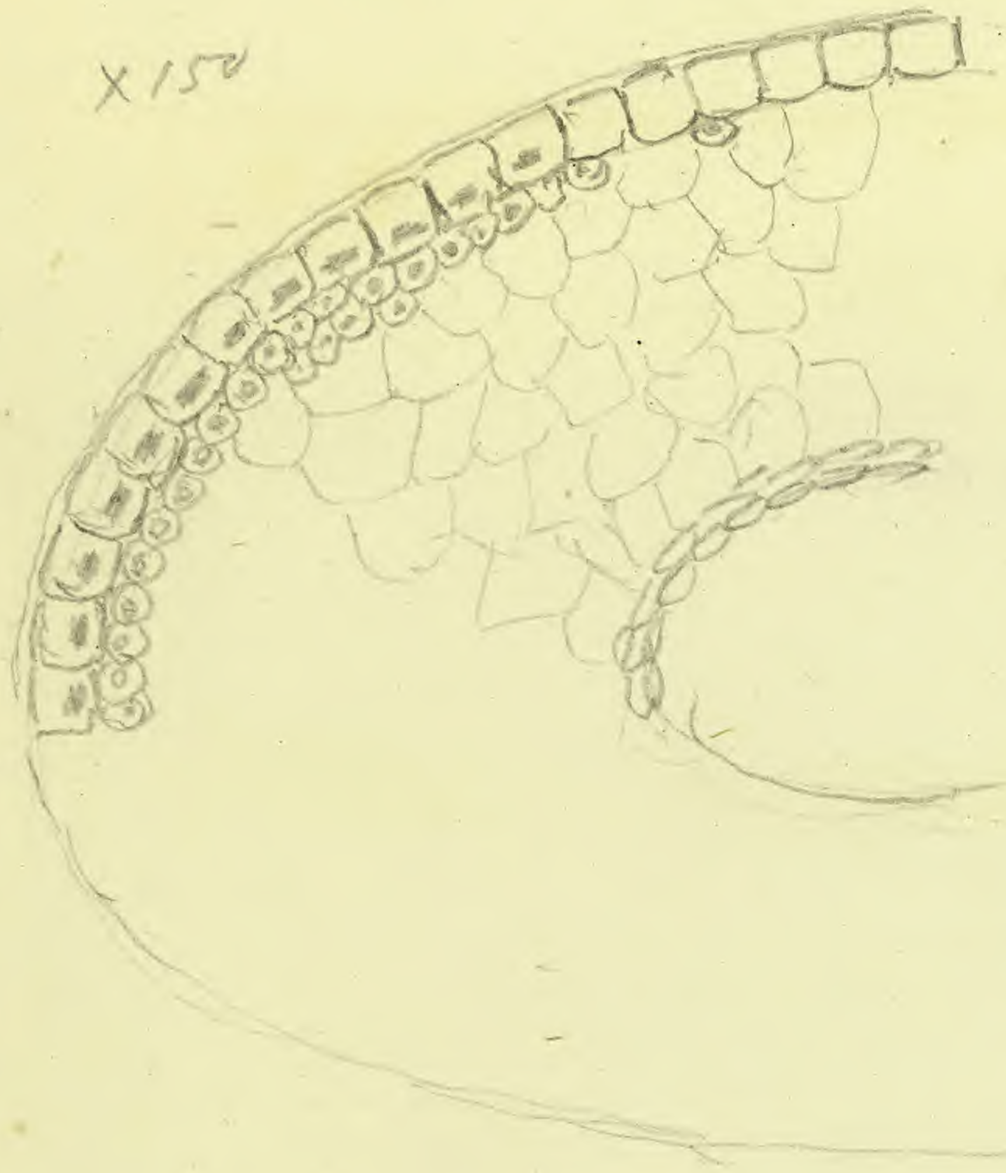
Jan 26 1876

Abies amabilis

Mount Hood

E Hall 1871

X 150



hypoderm consisting of smaller cells well developed on edges and upper and lower ridge something crowded - along each side of upper surface

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" Asia Loviana, ".

Shasta, Jeffrey [?]

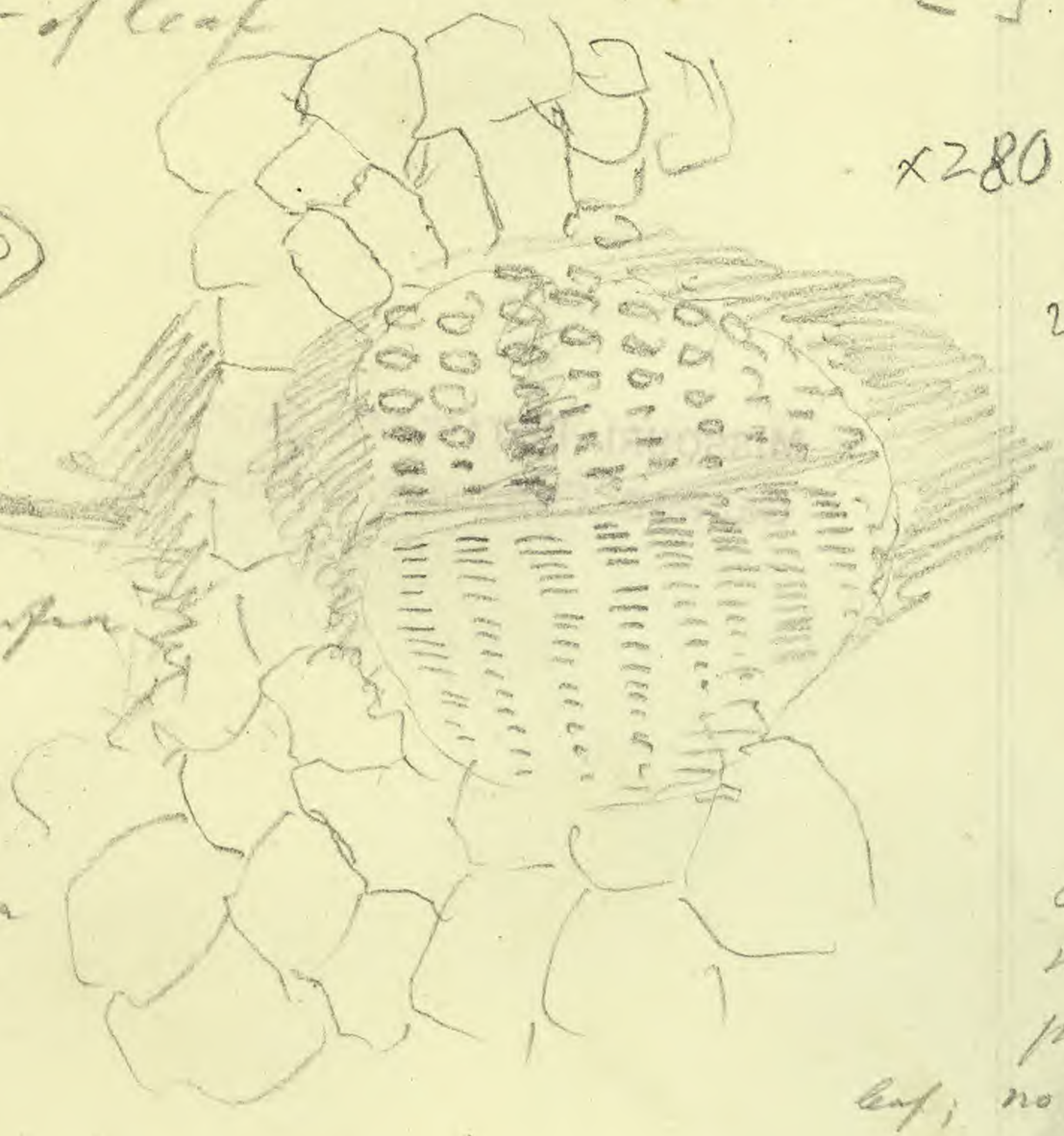
Aug 3rd 1874

ex Mc Elroy 1869

root of leaf

x10

x280



Small hypodermal cells
— edges & keel and
scattered under upper surface

Is not this a
mistake?
no occidentalis known
south of Mt Hood
Oct 1875

vascular
bundle of
right side of
Section

Oct 1875 Specimen
nothing but a single
paper with section of
leaf; no leaves to look?

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British Columbia

216 with cone

Cas irrorpe (cone)

220

Sawyer 1876
about 10 bands of stoma

6 or 7 bands

Cas. glaceri folea

March 13 1877

216

about 12 bands of stoma irreg.

about 6 bds stomata irreg.

Cas. viridis var irreg.

Apotheke.

JDE,

d Dumont

10th Street,

ST. LOUIS, MO.

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Abies subalpina

Dr Parry. Aug 1880

Mount Adams Washington Terr.

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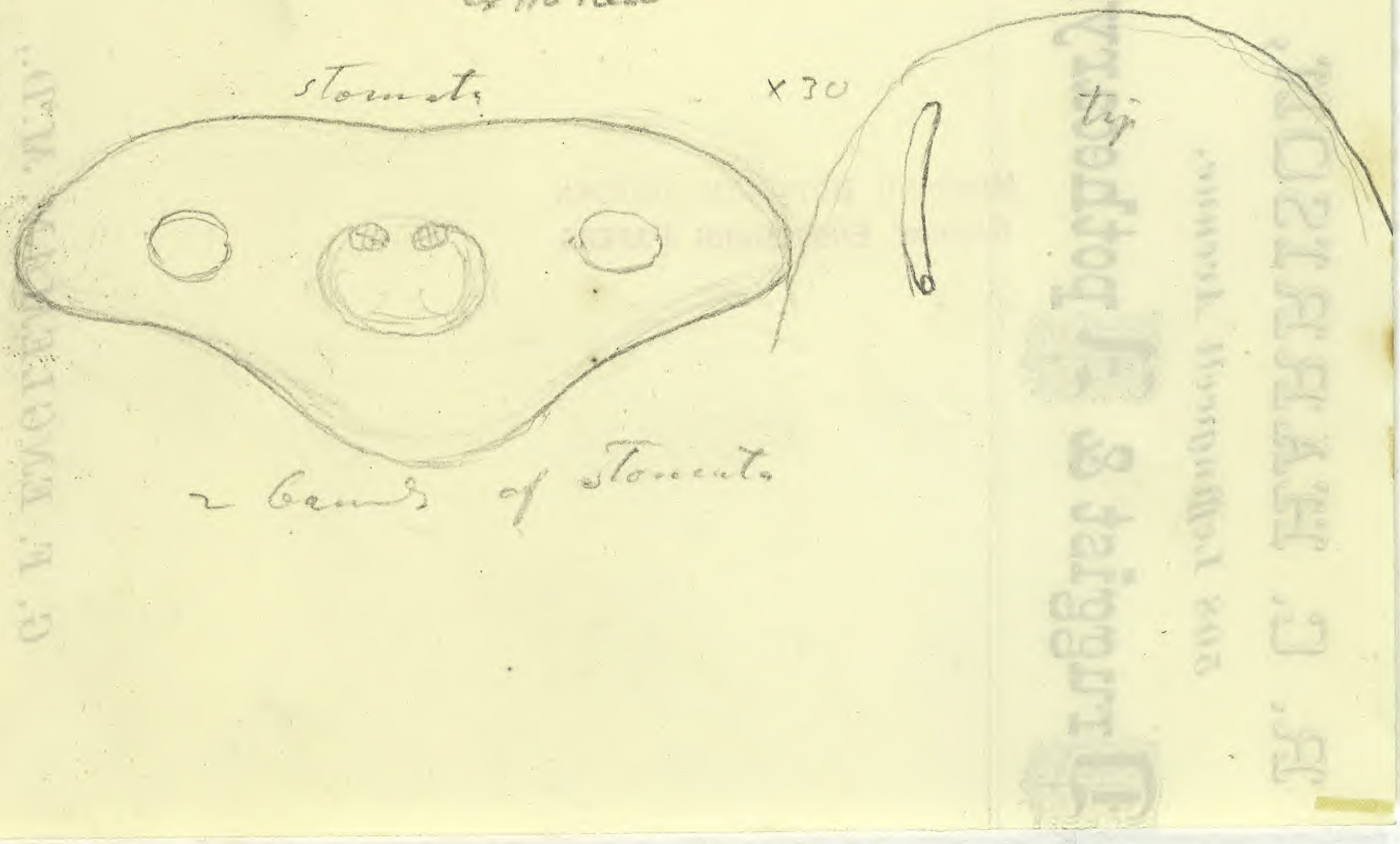
Abies Lasiocarpa Murray

Sept 30 1875

Mt Lyall Selkirk Range 49° Sources of the Columbia

ex HG Rowe



2 bands of stomata

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Albis ♂ Sept 30 1875

Colorado de Bary 1872

R bands of stomata white
many in green, appearing thicker

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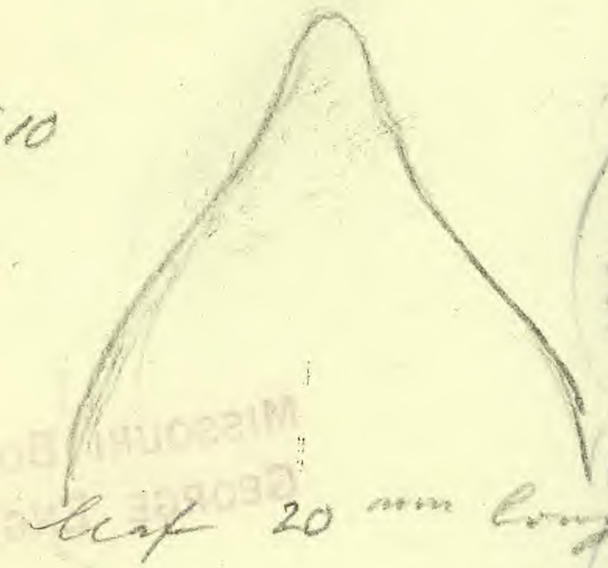
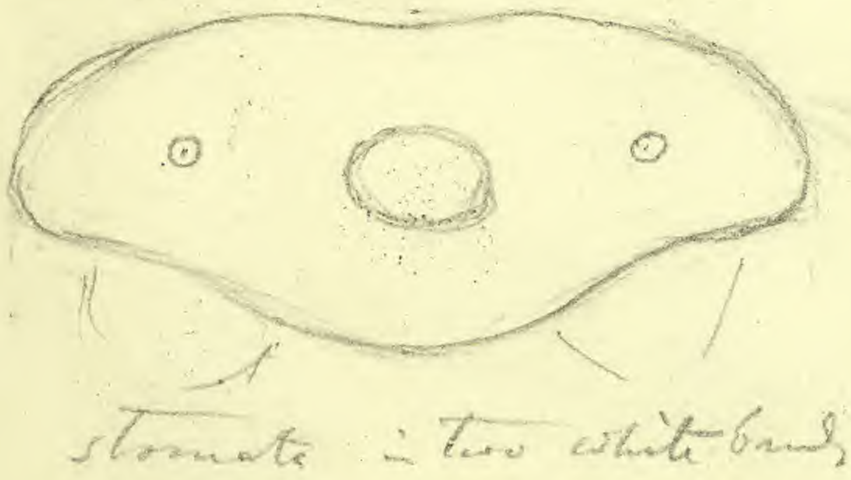
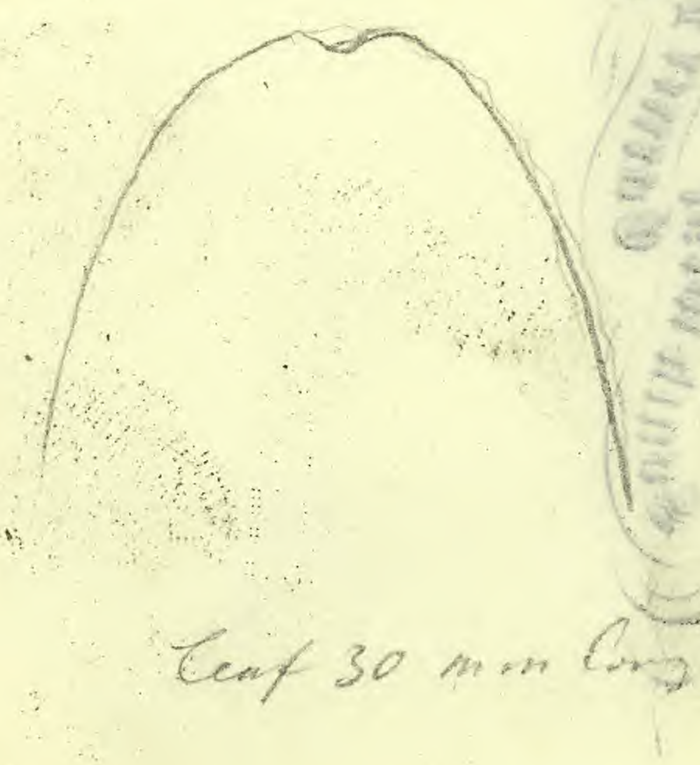
Sept 29 1875

Cheyenne Pass Wyoming, Allan

×10







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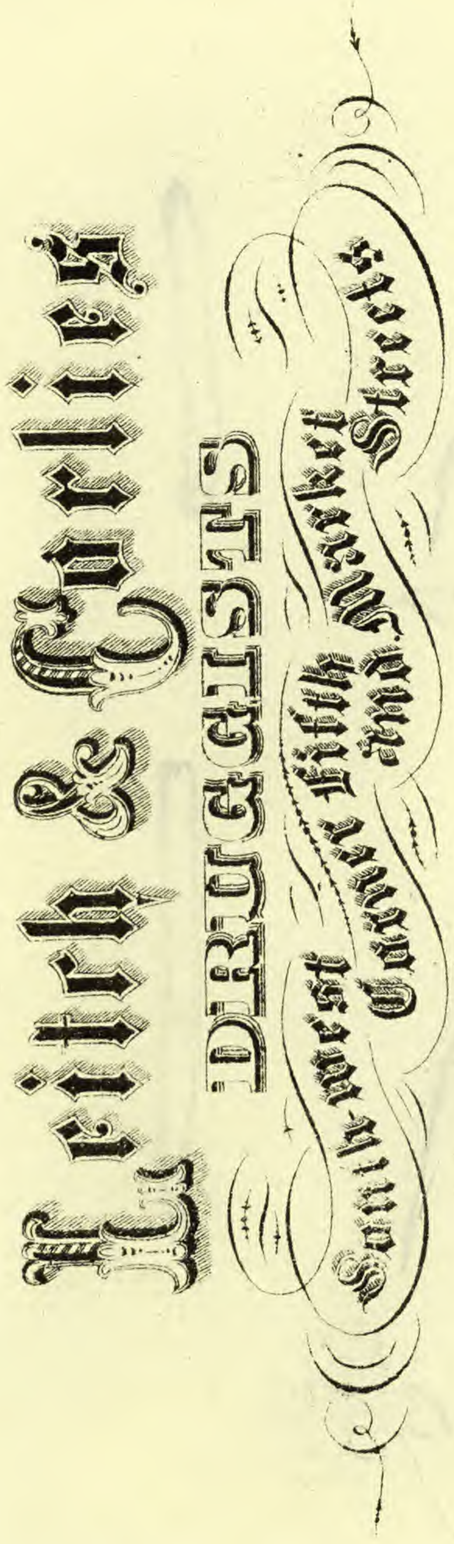

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